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Abstract for an Invited Paper for the APR15 Meeting of the American Physical Society

Dark Matter Particle Physics in Dwarf Galaxies

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Dark matter's non-gravitational interactions have profound implications for particle physics beyond the Standard Model. Searches for gamma-ray emission from Milky Way dwarf galaxies are among our most sensitive probes of dark matter annihilation. I will discuss powerful methods that have been developed to search for a signal as well as how uncertainties in the dark matter content of dwarf galaxies impact the particle physics conclusions. Finally, I will discuss the implications of the recent discovery of many new dwarfs in the Dark Energy Survey, including Reticulum 2.